REMARKS

Reconsideration of the holding that the subject matter of independent claims 9, 12, 13 is obvious in view of the combined teachings of Caroli and Corio is respectfully requested.

As previously argued, Corio has nothing to do with optical telecommunications networks, but with laser printing/writing devices. Applicants respectfully submit that Corio is ***not*** reasonably pertinent to the particular problem with which the applicants were concerned.

Applicants further submit that claim 9 has been misread. Claim 9 is not, as the Examiner proposed, concerned with the problem of "setting the output power of the light source at maximum power so that variable attenuator can be used to control the amplitude of the light signal to be added". Instead, claim 9 is concerned with the problem of improving the optical signal-to-noise ratio ("OSNR"), in the add path of an optical network node operating in an n-channel DWDM network. There is an optical amplifier in the add path of claim 9 that adds optical noise, and this has a negative impact on the OSNR. Applicants have proposed dealing with this negative impact.

In Corio, OSNR is not a problem at all. Corio's lasers are used above a threshold value, below which the laser diode output is predominantly a spontaneous emission. When the laser(s) of Corio are modulated in the way that they operate from just above the threshold (see col. 2, lines 24-25) to their maximum power, there is no problem of improving the optical signal-to-noise ratio, because there is no noise source in the optical path that would have a negative impact on the optical signal. The spontaneous emission of the laser diode is compensated for by controlling the modulation so that the lowest signal is always above the threshold. If there is no source of noise in the path, it is enough that a signal is above the threshold at its source. Hence, there is ***no*** problem with OSNR in Corio.

The following factors also place laser solutions for laser printing very remotely from solutions applicable to optical communications networks:

Firstly, the frequency of laser modulation in laser printers is several orders of magnitude lower than that in optical communications networks. For laser printers, the modulation frequency is in the range of tens of MHz; see page 6, last sentence of the first paragraph of the accompanying reference article: "The Need for Compact Blue-Green Lasers", Cambridge University Press, W. P. Risk, et al., which states: "*The ability to directly modulate the laser at frequencies up to 50 MHz is desirable*".

By contrast, in optical communications networks, the modulation frequencies are ***much higher*** due to much higher data rates that are transmitted, and such modulation frequencies are in the range of tens of GHz, which is 3 orders of magnitude higher than in laser printers (see page 3, left col., lines 7-11 of the accompanying reference article: "A Dense WDM Source ...", Silva, et al., which states: "*As the modulation frequency used was 1.75 GHz, ...*".

Secondly, in optical communications networks, the stability of the laser sources is a crucial factor, and this must be maintained within a range of a fraction of a nanometer (due to the large number of wavelengths used as transmission channels, and the need for keeping these channels separated). In the case of laser printers, there is one wavelength used in monochromatic printers and most color laser printers (which use the same laser for all four color compounds, e.g., cyan, magenta, yellow and black). However, even if the color laser printer uses a separate laser for each color component, and even if each one of these four lasers uses a different wavelength, then wavelength separation is not a problem with such a small number of wavelengths used.

Thirdly, the distance that the optical signals travel in DWDM networks is in the range of hundreds of kilometers. This requires components for amplification and maintaining the OSNR at a required level. The distance traveled by an optical signal in a printer is nowhere near the kilometer range of DWDM networks.

In consequence, the problems and solutions used in printers are vastly different from the ones used in DWDM networks. Corio is ***not*** reasonably pertinent to the particular problems with which the applicants were concerned.

The claims of the present invention must be analyzed from a position of a skilled person having knowledge of the prior art just before the priority date of the present application. However, applicants respectfully submit that the Examiner used the knowledge learned from the present invention in order to pick remote parts of unrelated prior art documents and combine them to arrive at the present invention. The Examiner ignored the teaching of each independent claim as a whole, and the problem solved by each independent claims and, instead, focused on a part of the solution offered by each independent claim . This approach, however, should not be used. When obviousness of an invention is analyzed by starting from the inventive solution, the person analyzing the claim is biased by the knowledge of the invention.

Caroli relates to a WDM add/drop node, and not laser printers. For the reasons set out above, the applicants believe that a person skilled in the art of optical telecommunications networks would not attempt to combine Caroli and Corio, because there is ***no motivation*** to do so, and because these two documents relate to remote fields of technology.

Therefore, applicants believe that the claims are novel and not obvious, and that the application is now in order for allowance.

Petition is hereby made for a one-month extension of the period to respond to the outstanding Official Action to November 16, 2009. The Commissioner is authorized to charge $130.00, as the Petition fee, any additional charges, or any overpayment, in connection with the filing of this response, or any such deficiency, or credit any such overpayment, to Deposit Account No. 11-1145.

Wherefore, a favorable action is earnestly solicited.

Respectfully submitted,

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